

REMARKS

The foregoing Amendment and remarks which follow are responsive to the Office Action mailed April 3, 2003, in relation to the above-identified patent application. In that Office Action, the Examiner objected to the Title of the present application as not being sufficiently descriptive. Additionally, the Examiner rejected Claims 10 and 11 due to the language of Claim 10 purportedly contradicting that of Claim 1. The Examiner also rejected Claims 1-6, 9-11 and 19-25 under 35 U.S.C. §102(a) as being anticipated by the Huang et al. reference, and rejected Claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable over the combination of the Huang et al. and Song references.

By this Amendment, Applicant has amended independent Claim 1 to describe "portions of" the first surface of the semiconductor die being attached to the second surface of each of the leads. Applicant respectfully submits that this modification to the language of Claim 1 clears any inconsistency with the language of Claim 10. As is most apparent from Figures 1 and 1A of the present application, portions of the first (lower) surface of the first (lower) semiconductor die are attached to the second (top) surfaces of the leads. As is best seen in Figure 1A, the first (lower) semiconductor die and leads are oriented relative to each other such that each of the bond pads on the first (lower) surface of the first (lower) semiconductor die is located between a respective pair of the leads such that the bond pads of the first (lower) semiconductor die do not contact the second (top) surface of any one of the leads. As indicated above, the limitation regarding portions of the first surface of the first semiconductor die being attached to the second surface of each of the leads is recited in Claim 1, with the limitation regarding the orientation of the bond pads relative to the leads (i.e., each bond pad being located between an adjacent pair of leads) being recited in Claim 10.

Returning now to the Section 102(a) rejection of independent Claims 1 and 19, in independent Claim 1, portions of the first surface of the first semiconductor die are described as being attached to the second surface of each of the leads. Similarly, in

independent Claim 19 in its current form, the first semiconductor die is described as being attached to each of the leads.

Contrary to the Examiner's argument, Applicant respectfully submits that the Huang et al. reference clearly does not teach, suggest or show any embodiment of a semiconductor package wherein a semiconductor die is directly attached to the leads. In the embodiment of the semiconductor package shown in Figure 7 of the Huang et al. reference (relied upon by the Examiner), a first or lower chip 304 is shown as being mounted to the top surface of a die pad 318 via a layer of adhesive 322. Disposed about the periphery of the die pad 318 are a plurality of leads 326, each of which includes a first or top surface 328a, and a second or bottom surface 328b which has a stepped structure defining a protruded zone 330. Stacked upon the lower first chip 304 is an upper second chip 310 which is secured to the first chip 304 by a layer of adhesive 324. As clearly shown in Figure 7, no portion of the lower surface of the first chip 304 is attached to the top, first surfaces 328a of the leads 326. Rather, the leads 326 are disposed well outward of the peripheral edges of the first and second chips 304, 310. As indicated above, in independent Claim 1, portions of the first surface of the first semiconductor die are described as being "attached to the second surface of each of the leads". Similarly, in independent Claim 19, the first semiconductor die is described as being "attached to each of the leads". The direct attachment of the semiconductor die to the leads in accordance with the present invention is clearly shown in Figures 1 and 1A, and in the assembly steps shown in Figures 2A-E. The deficiencies of Figure 7 of the Huang et al. reference hold true for the single chip embodiments shown in Figures 3, 5 and 6 thereof. The shortcomings of the Huang et al. reference are not alleviated by the newly cited Song reference, the pertinent teachings of which are limited to the purported exposure of a die paddle within a package body.

On the basis of the foregoing, Applicant respectfully submits that the stated objections and grounds of rejection have been overcome, and that Claims 1-11 and 19-25 are now in condition for allowance. An early Notice of Allowance is therefore respectfully requested.



If any additional fee is required, please charge Deposit Account Number 19-4330.

Date: 4/25/03

By:

Respectfully submitted,

A handwritten signature in black ink, appearing to read "M B Garred".

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